



BEST AVAILABLE COPY

PATENT NUMBER

U.S. UTILITY Patent Application

50852

5A

O.I.P.E.

PATENT DATE

SCANNED

Q.A.

APPLICATION NO. 09/838139	CONT/PRIOR D F	CLASS 062	SUBCLASS 476	ART UNIT 3744	EXAMINER Doerrle
------------------------------	-------------------	--------------	-----------------	------------------	---------------------

APPLICANTS

Katsumi Mabuchi
Heikitiro Midorikawa
Tomoko Kikuchi
Takashi Honda

TITLE

Abstract *Perforated polypropylene (PP) membranes were prepared by the phase-inversion technique. The effect of the concentration of the polypropylene solution on the morphology and properties of the membranes was studied. The membranes were characterized by scanning electron microscopy (SEM), Fourier transform infrared spectroscopy (FTIR), and thermogravimetric analysis (TGA). The results showed that the morphology of the membranes changed from a finger-like structure to a dense structure as the concentration of the polypropylene solution increased. The membranes prepared from a 10 wt % polypropylene solution showed the best properties, including high permeability, high thermal stability, and high mechanical strength.*

PTO-2040
12/99

ISSUING CLASSIFICATION

[illegible]

<input type="checkbox"/> TERMINAL DISCLAIMER	DRAWINGS		CLAIMS ALLOWED	
	Sheets Drwg.	Figs. Drwg.	Print Fig.	Total Claims
<input type="checkbox"/> The term of this patent subsequent to _____ (date) has been disclaimed.	_____ (Assistant Examiner) (Date)		NOTICE OF ALLOWANCE MAILED	
<input type="checkbox"/> The term of this patent shall not extend beyond the expiration date of U.S Patent. No. _____ _____ _____	_____ (Primary Examiner) (Date)		ISSUE FEE	
			Amount Due	Date Paid
<input type="checkbox"/> The terminal _____ months of this patent have been disclaimed.	_____ (Legal Instruments Examiner) (Date)		ISSUE BATCH NUMBER	

WARNING:

The information disclosed herein may be restricted. Unauthorized disclosure may be prohibited by the United States Code Title 35, Sections 122, 161 and 288. Possession outside the U.S. Patent & Trademark Office is restricted to authorized employees and contractors only.

Form PTO-458A
(Rev. 6/89)

FILED WITH: ☐ DISK (CRF) ☐ FICHE ☐ CD-ROM

(Attached in pocket on right inside flap)